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INTENDED FOR COSMONAUTS

M. Monusov

Foreign Technology Division  
Wright-Patterson Air Force Base, Ohio

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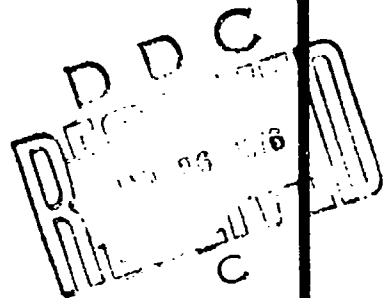
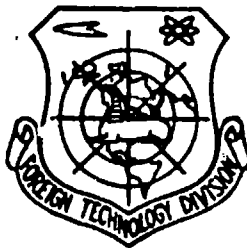
## FOREIGN TECHNOLOGY DIVISION



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by

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PREPARED BY:  
TRANSLATION DIVISION  
FOREIGN TECHNOLOGY DIVISION  
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## INTENDED FOR COSMONAUTS

### Fact and Commentary

M. Monusov, correspondent of the newspaper "Evening Novosibirsk"

"The Soviet side transferred to the American side a sample of fireproof fabric 'Lola' from which it is supposed that the outer clothing of the astronauts can be made. The American side tested this material: the fabric extinguishes itself if it ignites in a medium of pure oxygen at a pressure of 320 millimeters of mercury... Both sides agreed that the material can be recommended for the manufacture of flight suits for cosmonauts which will be used in the joint flight of the Apollo-Soyuz program"...

This document composed in Houston - the center for manned space flights of the USA - was not exactly sent to Novosibirsk by chance. I have in my hands a piece of soft, thin fabric which is normal in appearance. One finds it hard to believe that it is fit for suits for cosmonauts. Scientists of many of the country's institutes worked for many years on its creation. But its beginning was namely here - at the Institute of Organic Chemistry of the Siberian Division of the AS USSR.

"In 1966," says associate member of the Academy of Sciences of the USSR V. P. Mamayev, "Doctor of Chemical Sciences Yevgeniy

Favlovich Fokin developed a method of obtaining a new monomer. For the first time in the country a thermally stable polymer was synthesized based on it."

The strength and the thermostability of the new polymer interested the branch institute. They decided to attempt to make a synthetic yarn from it. Several years of joint research was necessary for this.

"The quality of the starting material did not satisfy the creators of the fiber for a long time", explains the inventor Ye. P. Fokin. "It was necessary to achieve a high degree of its purity. Related institutes in other cities helped us."

Dozens of variations of the monomer were tested. Only after two years was a fiber finally obtained. Before the assistant director of the institute, V. A. Livanov, and the manager of the technological laboratory, Candidate of Chemical Sciences A. G. Khmel'nitskiy, there arose a problem which was no less important - to adjust production of the starting material in the experimental shop. A significant amount of this substance was sent from here to various organizations of the country.

And now the work of many years has been completed. A unique industrial technology has been developed for obtaining monomers for thermally stable polymers. This means that there will be an emergence of new high-quality adhesives for metal, tapes with excellent mechanical and electroinsulation properties, and other synthetic materials which have not been manufactured in our country to the present time. And already a fiber has been created which is fit for suits for the cosmonauts,